

Amendments to the Specification:

Please replace the paragraph on page 4, lines 16 to 18, with the following paragraph:

There is therefore a considerable need for allowing detection of an injected dye bolus ~~to be injected~~ using a simple, compact and transportable device.

Please replace the paragraph on page 4, lines 29 to 37, with the following paragraph:

Said object is also achieved by means of a device of the type mentioned at the outset, characterized in that the optical radiation source is designed to emit pulses ~~of~~ an excitation radiation with a first frequency, and the detection arrangement is designed to detect a response radiation with a second frequency different than the first frequency and to determine a temporal relation between the emitted excitation radiation and at least part of the detected response radiation.

Please replace the paragraph on page 5, lines 1 to 13, with the following paragraph:

According to the invention, therefore, a fluorescent radiation is detected which is generated by a preferably pulsed excitation ~~generation radiation~~ in the dye bolus, on account of its fluorescent property. A response signal with time resolution is measured, at least the interval of part of the response signal from the triggering excitation pulse being determined as a measure of the flight time of the fluorescent signal through the tissue layers. The pulsed excitation radiation preferably has a pulse

duration of a few picoseconds (ps). The time resolution of the generated fluorescence signal lies in the nanosecond range or preferably in the picosecond range.

Please replace the paragraph on page 5, lines 1 to 13, with the following paragraph:

The use of fluorescent dyes for tissue examination is already known in principle. The present invention differs ~~form~~ from this in terms of the time-resolved determination of the fluorescence response to an excitation pulse, with the peculiarities arising from the detection of the dye bolus.